Olivier Politano

List of Publications by Year in Descending Order

59 papers	939 citations	18 h-index	29 g-index
60 ext. papers	1,071 ext. citations	3.4 avg, IF	4.4 L-index

#	Paper	IF	Citations
59	Mechanical alloying in the Co-Fe-Ni powder mixture: Experimental study and molecular dynamics simulation. *Powder Technology*, **2022**, 399, 117187	5.2	1
58	Thermal Stability of Medium- and High-Entropy Alloys of 3d-Transition Metals. *Journal of Phase Equilibria and Diffusion*, **2021**, 42, 720	1	3
57	Mechanical activation of metallic powders and reactivity of activated nanocomposites: a molecular dynamics approach. *Applied Physics A: Materials Science and Processing*, **2021**, 127, 1	2.6	1
56	Molecular Dynamics Studies in Nanojoining: Self-Propagating Reaction in Ni/Al Nanocomposites. *Journal of Materials Engineering and Performance*, **2021**, 30, 1-7	1.6	1
55	Reactivity of Ni/Al nanocomposites prepared by mechanical activation: A molecular dynamics study. *Journal of Applied Physics*, **2021**, 129, 065301	2.5	2
54	Effects of mechanical activation on chemical homogeneity and contamination level in dual-phase AlCoCrFeNi high entropy alloy. *Materials Chemistry and Physics*, **2021**, 272, 125000	4.4	2
53	Substrate orientation effects on nanoelectrode lithography: ReaxFF molecular dynamics and experimental study. *Journal Physics D: Applied Physics*, **2020**, 53, 295108	3	3
52	Reaction front propagation in nanocrystalline Ni/Al composites: A molecular dynamics study. *Journal of Applied Physics*, **2020**, 128, 215301	2.5	3
51	Effects of planetary ball milling on AlCoCrFeNi high entropy alloys prepared by Spark Plasma Sintering: Experiments and molecular dynamics study. *Journal of Alloys and Compounds*, **2020**, 820, 153448	5.7	26
50	Combustion synthesis of TiC-based ceramic-metal composites with high entropy alloy binder. *Journal of the European Ceramic Society*, **2020**, 40, 2527-2532	6	16
49	Reactivity of the Ti/Al system: Experimental study and molecular dynamics simulations. *Journal of Applied Physics*, **2020**, 127, 145304	2.5	5
48	High-Entropy-Alloy Binder for TiC-Based Cemented Carbide by SHS Method. *International Journal of Self-Propagating High-Temperature Synthesis*, **2019**, 28, 196-198	0.7	7
47	Mechanical activation of metallic powders in planetary ball mills: multi-scale modeling and experimental observation. *IOP Conference Series: Materials Science and Engineering*, **2019**, 558, 012034	0.4	2
46	ReaxFF molecular dynamics simulation study of nanoelectrode lithography oxidation process on silicon (100) surface. *Applied Surface Science*, **2019**, 496, 143679	6.7	4
45	Explosive crystallization in amorphous CuTi thin films: a molecular dynamics study. *Journal of Non-Crystalline Solids*, **2019**, 505, 202-210	3.9	6
44	Epitaxial growth of the intermetallic compound NiAl on low-index Ni surfaces in Ni/Al reactive multilayer nanofoils. *Acta Materialia*, **2018**, 148, 133-146	8.4	14
43	Molecular Dynamics Simulation of Self-Propagating Thermal Waves in Amorphous Cu50Ti50 Films and Thin Cu/Ti Sandwiches. *International Journal of Self-Propagating High-Temperature Synthesis*, **2018**, 27, 114-116	0.7	

42	SHS in Ni/Al Nanofoils: A Review of Experiments and Molecular Dynamics Simulations. *Advanced Engineering Materials*, **2018**, 20, 1800091	3.5	22
41	Alloying propagation in nanometric Ni/Al multilayers: A molecular dynamics study. *Journal of Applied Physics*, **2017**, 121, 055304	2.5	21
40	Microstructure evolution and self-propagating reactions in Ni-Al nanofoils: An atomic-scale description. *Journal of Alloys and Compounds*, **2017**, 708, 989-998	5.7	10
39	Comparative study of embedded-atom methods applied to the reactivity in the NiAl system. *Modelling and Simulation in Materials Science and Engineering*, **2017**, 25, 064002	2	18
38	Self-propagating waves of crystallization in metallic glasses. *Applied Physics Letters*, **2017**, 111, 093105	3.4	9
37	Modeling self-sustaining waves of exothermic dissolution in nanometric Ni-Al multilayers. *Acta Materialia*, **2016**, 120, 189-204	8.4	22
36	Electronic structure and energy decomposition analyses as a tool to interpret the redox potential ranking of naphtho-, biphenyl- and biphenylene-quinone isomers. *Physical Chemistry Chemical Physics*, **2016**, 18, 26651-26660	3.6	11
35	Combustion in reactive multilayer Ni/Al nanofoils: Experiments and molecular dynamic simulation. *Combustion and Flame*, **2016**, 166, 158-169	5.3	55
34	Dissolution at Interfaces in Layered Solid-Liquid Thin Films: A Key Step in Joining Process. *Journal of Materials Engineering and Performance*, **2016**, 25, 3270-3274	1.6	2
33	Molecular dynamics study of high-pressure alumina polymorphs with a tight-binding variable-charge model. *Computational Materials Science*, **2016**, 111, 181-189	3.2	4
32	Molecular dynamics simulations of self-propagating reactions in NiAl multilayer nanofoils. *Journal of Alloys and Compounds*, **2015**, 652, 25-29	5.7	17
31	Dissolution process at solid/liquid interface in nanometric metallic multilayers: Molecular dynamics simulations versus diffusion modeling. *Acta Materialia*, **2015**, 99, 363-372	8.4	35
30	Structure evolution and reaction mechanism in the Ni/Al reactive multilayer nanofoils. *Acta Materialia*, **2014**, 66, 86-96	8.4	70
29	Microstructure development during NiAl intermetallic synthesis in reactive NiAl nanolayers: Numerical investigations vs. TEM observations. *Surface and Coatings Technology*, **2013**, 215, 485-492	4.4	36
28	Reactive molecular dynamics of the initial oxidation stages of Ni111 in pure water: effect of an applied electric field. *Journal of Physical Chemistry A*, **2012**, 116, 11796-805	2.8	63
27	Electrochemical properties of crystallized dilithium squarate: insight from dispersion-corrected density functional theory. *Physical Chemistry Chemical Physics*, **2012**, 14, 11398-412	3.6	22
26	A Reactive Force Field Molecular Dynamics Simulation Study of Corrosion of Nickel. *Defect and Diffusion Forum*, **2012**, 323-325, 139-145	0.7	6
25	Study of the Reactive Dynamics of Nanometric Metallic Multilayers Using Molecular Dynamics : The Al-Ni System. *Defect and Diffusion Forum*, **2012**, 323-325, 89-94	0.7	

24	Molecular dynamics simulations of nanometric metallic multilayers: Reactivity of the Ni-Al system. *Physical Review B*, **2011**, 84,	3.3	46
23	Numerical Simulations on the Growth of Thin Oxide Films on Aluminum Substrates. *Defect and Diffusion Forum*, **2010**, 297-301, 954-959	0.7	2
22	Numerical Determination of Intrinsic Diffusion in Fe-Cr-Al Systems. *Defect and Diffusion Forum*, **2010**, 297-301, 948-953	0.7	
21	Numerical Studies of the Diffusion Processes and First Step Oxidation in Nickel-Oxygen Systems by Variable Charge Molecular Dynamics. *Defect and Diffusion Forum*, **2010**, 297-301, 513-518	0.7	1
20	Oxidation of nanocrystalline aluminum by variable charge molecular dynamics. *Journal of Physics and Chemistry of Solids*, **2010**, 71, 119-124	3.9	20
19	Diffusion of oxygen in nickel: A variable charge molecular dynamics study. *Solid State Communications*, **2010**, 150, 439-442	1.6	34
18	A variable charge molecular dynamics study of the initial stage of nickel oxidation. *Applied Surface Science*, **2010**, 256, 5968-5972	6.7	8
17	Numerical Determination of Intrinsic Diffusion Coefficient of Aluminide Coatings on Metals. *Defect and Diffusion Forum*, **2009**, 289-292, 269-276	0.7	2
16	Variable-charge method applied to study coupled grain boundary migration in the presence of oxygen. *Acta Materialia*, **2009**, 57, 1988-2001	8.4	42
15	A local chemical potential approach within the variable charge method formalism. *Modelling and Simulation in Materials Science and Engineering*, **2008**, 16, 025006	2	18
14	Quenched molecular dynamics studies on the extraction energy of aluminum atoms. *Surface and Interface Analysis*, **2008**, 40, 320-322	1.5	1
13	Grain size, stress and surface roughness. *Surface and Interface Analysis*, **2008**, 40, 518-521	1.5	13
12	Formation of surface roughness on nanocrystalline aluminium samples under straining by molecular dynamics studies. *Philosophical Magazine*, **2007**, 87, 129-145	1.6	6
11	Nanoscale oxide growth on Al single crystals at low temperatures: Variable charge molecular dynamics simulations. *Physical Review B*, **2006**, 73,	3.3	49
10	An empirical model for free surface energy of strained solids at different temperature regimes. *Applied Surface Science*, **2006**, 252, 5384-5386	6.7	5
9	An empirical method to determine the free surface energy of solids at different deformations and temperature regimes: An application to Al. *Surface Science*, **2005**, 586, 15-24	1.8	13
8	Molecular dynamics simulations of the nano-scale room-temperature oxidation of aluminum single crystals. *Surface Science*, **2005**, 579, 47-57	1.8	60
7	Determination of the Stress Distribution at the Interface Metal-Oxide: Numerical and Theoretical Considerations. *Defect and Diffusion Forum*, **2005**, 237-240, 145-150	0.7	1

6	Theoretical and numerical considerations on the surface energy for deformed isotropic nanocrystals. *Philosophical Magazine*, **2004**, 84, 3397-3409	1.6	4
5	Numerical and theoretical considerations on the surface energy for pure solids under strain. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2004**, 387-389, 749-752	5.3	7
4	Energetics of hydrogen impurities in aluminum and their effect on mechanical properties. *Physical Review B*, **2002**, 65,	3.3	68
3	A 3D mesoscopic approach for discrete dislocation dynamics. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2001**, 309-310, 261-264	5.3	12
2	Dynamical features of forest interactions. *Computational Materials Science*, **2000**, 17, 343-346	3.2	3
1	On the dynamics of dislocation patterning. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1997**, 234-236, 397-400	5.3	5